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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/627,495	07/25/2003	Ricky A. Hall	FMCE-P101	5190

7590 02/13/2006
Henry C. Query, Jr.
504 S. Pierce Avenue
Wheaton, IL 60187

EXAMINER

BEACH, THOMAS A

ART UNIT	PAPER NUMBER
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3671

DATE MAILED: 02/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/627,495	HALL ET AL.	
	Examiner	Art Unit	
	Thomas A. Beach	3671	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on amendment filed 11/18/05.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 9, 13, and 19-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 9, 13, 19-24, and 26-29 is/are rejected.
- 7) ☒ Claim(s) 25,30 and 31 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>11/18/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5, 9, 13, 19-24, and 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Agee et al 6,262,131 in view of Schanke et al 6,211,255. Agee shows a combination with a fixed offshore hydrocarbon production platform which includes a deck attached to a base that is secured to the sea floor, the improvement comprising a GTL facility for converting natural gas into a hydrocarbon liquid which having a syngas reactor for converting the natural gas into syngas (abstract), and a liquids production unit for converting the syngas into the hydrocarbon liquid; wherein at least one of the syngas reactor and the liquids production unit includes a catalyst which is constructed using PI micro-reactor technology, and wherein the GTL unit is sufficiently small to be located on the deck of the platform (col. 24, lines 26-61). Agee does not show a monolithic catalyst, which includes a solid body, a plurality of discrete channels which extend through the body and comprise walls, and a catalyst material which is deposited on the walls; wherein the monolithic catalyst comprises a cell density of between about 1000 cells/in² and about 100 cells/in²; however, Schanke shows a similar system with a monolithic catalyst, which includes a solid body, a plurality of

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discrete channels which extend through the body and comprise walls, and a catalyst material which is deposited on the walls; wherein the monolithic catalyst comprises a cell density of between about 1000 cells/in² and about 100 cells/in². Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Agee, as taught by Schanke, to include the catalyst material to improve the flow in the channels, thus improving the efficiency of the reactor.

As concerns claim 2, Agee shows a gas pre-processing unit for converting the natural gas into a form which is suitable for processing by the syngas reactor (abstract).

As concerns claim 3, Agee shows the gas pre-processing unit performs at least one of the following functions on the natural gas: filtering; desulphering and dehydrating (col. 15, lines 42-54).

As concerns claims 4 and 20, Agee shows a hydrocracker unit for converting the hydrocarbon liquid into at least one hydrocarbon fuel (col. 16, line 64).

As concerns claim 5, Agee shows the syngas reactor employs a steam reforming process to convert the natural gas into syngas (col. 18, lines 52-57).

As concerns claim 9, Agee shows the liquids production unit employs a Fisher-Tropsch process to convert the syngas to the hydrocarbon liquid (abstract).

As concerns claim 17, Agee shows the liquids production unit include an inactive substrate having a plurality of channels formed therein (col. 8, lines 5-33).

As concerns claim 18, Agee shows the channels are coated with a Fisher-Tropsch catalyst (col. 2, lines 5-22).

As concerns claim 19, Agee shows a gas pre-processing unit connected upstream of the syngas reactor for filtering, desulphering or dehydrating the natural gas (col. 15, lines 42-54).

As concerns claims 21-24 and 26-29, it would have been an obvious matter of design choice to modify the combination to include the range of since applicant has not disclosed that these ranges solve any particular problem or purpose and it appears other similar ranges would work equally well. Furthermore, routine experimentation would lead one of ordinary skill in the art to these ranges.

Allowable Subject Matter

3. Claims 25 and 30-31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

4. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas A. Beach whose telephone number is

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571.272.6988. The examiner can normally be reached on Monday-Friday, 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Will can be reached on 571.272.6998. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thomas A. Beach

February 6, 2006

THOMAS A. BEACH
Patent Examiner
Group 3600